Installation Engineering Handbook 8
Western Electric Company, Incorporated
Service Division

Section 203
dated 3-7-72
Replaces: Section 203
dated 10-17-63

RUNNING CABLE AND WIRE

TURNOVER SPLICES, BULK WIRE, SHIELDED WIRE

CONTENTS

---

1. GENERAL

1.1 Scope of Section

1.11 This section covers the methods and requirements for running the following cables and wires:

(a) Switchboard cable with turnover splices

(b) Bulk wire

(c) Shielded wire

1.2 General Information Pertaining to Arrangement of Tools, Precautions, Verification, Specs, and Drawings and Figures

1.21 Refer to Section 1 of this handbook for information pertaining to these items.

2. INSTALLING EQUIPMENT

2.1 Tools and Supplies

2.11 The tools and supplies normally required for running turnover splices, bulk wire and shielded wire are listed in Section 200 of this handbook.

3. RUNNING SWITCHBOARD CABLES WITH TURNOVER SPLICES

3.1 Run switchboard cable with turnover splices in accordance with the procedures as outlined in Handbook 9, Section 372.

NOTE: Switchboard cables with turnover splices are designated in the job cabling specification with the symbol "SBQ".

4. RUNNING BULK WIRE

4.1 Tagging

4.11 Place cable tags SD4-218 or SD4-218A on both ends of the bulk wire bearing the information as required in the Installers Cable Running List of the job specification.

4.111 The original portion of the SD4-218A Cable Tag or one portion of the SD4-218 Cable Tag should be placed on the forward or running end of the wire. The remaining portion of the SD4-218 or carbon of the SD4-218A should be stored on hooks provided on rear of cross-brace cable tag storage bars.

This section includes material from BSP 800-614-152
Copyright, 1968, by American Telephone and Telegraph Company
Printed in U.S.A.

4.2 Running

4.21 The R-3410 Wire Spool Dispenser shown in Figure 1 (new design shown in Fig. 2) is a quick loading, mobile dispenser for running bulk wire. The R-3410 is equipped with 5 spindles for loading spools, each spindle holding 5 large or 5 small spools. Each spindle is equipped with a braking bar to prevent wire overrun, having two mounting hole positions; one to permit loading large spools and one for small spools. Brake bars should be positioned as illustrated in Figure 1. Also 5 cable tag storage bars with hooks to hold cable tags are provided.

4.211 Loading Wire Spools on R-3410 Spool Wire Dispenser

4.2111 Mount wire spools on spindles in alternate directions. That is the spools should unwind in such a manner that the first spool unwinds in a clockwise direction, the adjacent spool unwinding in a counterclockwise direction, the third spool unwinding in a clockwise direction and so on. Thus, if a spool pulls its adjacent spool, the adjacent spool's "P" wire will not unwind because it would be turning in a direction opposite to the unwinding direction.

4.2112 feed ends of wires through holes in braking bars. The ends of the "P" wire on unused spools should be bent around the braking bar. This limits the unused spool from becoming unintentionally unwound.

4.22 Run all bulk wire after switchboard cables are in place. Secure bulk wire in the same manner as the switchboard cables. Where there is a tendenc for the wires to slip off the rack, band the wires to an adjacent cable with two strands of approved twine using a starting stitch with a square knot. For protection of wires under clips, refer to Section 312 of this handbook.

4.221 Run as many wires as can be conveniently handled at one time in the same manner as switchboard cable.

4.222 Exercise care in handling wires to prevent kinks and damage to the insulation. Follow the contour of the switchboard cables at turns and fans.

4.223 Band the wires together temporarily with approved twine in the following manner. The wires to be run should be pulled through the center of the spool of twine. The twine should then be allowed to unwind around the wires as shown in Figures 2 and 3.

4.3 Running Wires to 33 Type Connecting Blocks On Distributing Frames

4.31 Run wires to 33 type connecting blocks on distributing frames as shown on ED-90046-01.

4.4 Running Wires to 33 and 43 Type Connecting Blocks on Relay Racks

4.41 Wires to 33 and 43 type connecting blocks run within clips per ED-90046-70 (channel and I beam relay racks) or ED-91210-51, -52 (angle type relay racks) should be provided with fiber protection at the clip locations. Fiber protection, however, is not required where only type AM or BH wire is enclosed by such clips.

4.411 Where the equipment on the relay rack provides a suitable opening near the connecting block through which the leads to the connecting block may be passed, these leads shall be brought down the bay on the ground lead brackets, on the inside of the relay rack upright (bulb angle, channel or I beam) or on the switchboard cable brackets at the rear of relay rack. Avoid using unequipped space reserved for future equipment.

5. RUNNING SHIELDED WIRE

5.1 Run shielded wire in a manner similar to that outlined in the preceding paragraphs for bulk wire.

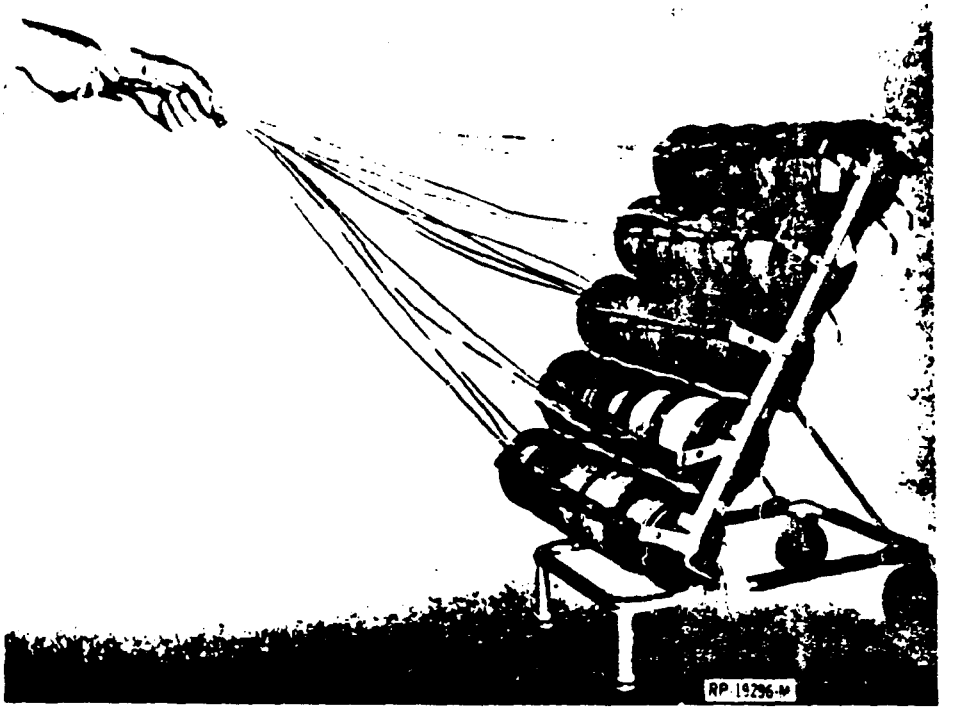
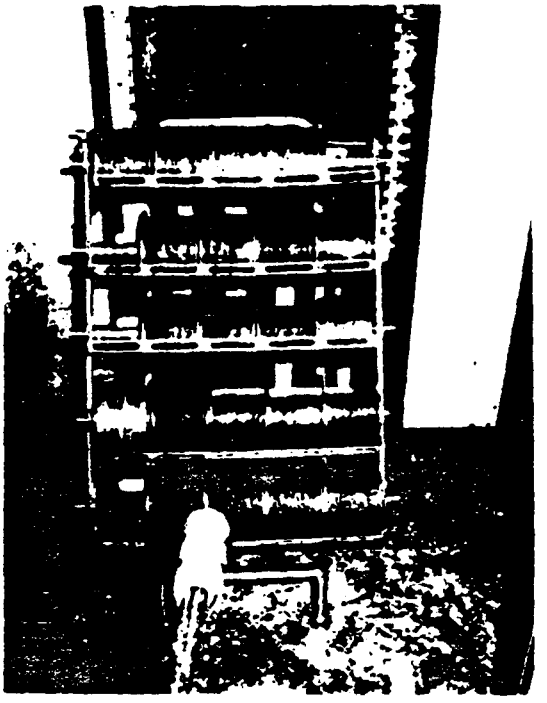


FIGURE 1 SPOOL WIRE DISPENSER
(PAR. 4.21, 4.2111, and 4.2112)



RP-0145 RM-1

FIGURE 2 SPOOL WIRE DISPENSER WITH NEW TYPE BRAKING BAR
(PARS. 4.21, 4.223)

RP-0146 RM-1

FIGURE 3 TWINE UNWINDING AROUND WIRES AS THEY ARE BEING PULLED
(PAR. 4.223)

6. VERIFICATION

VERIFICATION ITEMS AND BRIEF STATEMENT OF REQUIREMENTS		REFERENCE	
		Par. No.	Fig. No.
6.1	Running Bulk Wire		
6.11	Wires to 33 and 43 Type Connecting Block		
6.111	On Distributing Frames	4.31	
6.112	On Relay Racks	4.41	

→ Arrowed lines indicate changed or new information.

[Vertical line at side of paragraph indicates requirement.

Assistant Manager
Common Installation Engineering

Reason for Reissue:
To change Paragraphs 4.11, 4.111, 4.21, 4.2111, 4.2112, 4.22, and 4.223.